

**Channel Islands National Marine Sanctuary
Sanctuary Advisory Council**

Final Meeting Notes

July 20, 2007

Robert J. Lagomarsino Visitor Center Auditorium
Channel Islands National Park Headquarters
1901 Spinnaker Drive · Ventura Harbor, CA

Note: Audio tape recordings of this Sanctuary Advisory Council (SAC) meeting are available upon request; contact the SAC Coordinator at 805-884-1464.

Attending:

<u>Government Representatives:</u>	<u>Community Representatives:</u>
<u>National Park Service</u> Member Russell Galipeau	<u>Tourism</u> Alternate Andrea Moe
<u>US Coast Guard</u> Alternate Scott Young	<u>Non-Consumptive Recreation</u> Member Scott Dunn Alternate Carolyn Greene
<u>Minerals Management Service</u> Member Dr. Fred Piltz	<u>Commercial Fishing</u> Alternate Bruce Steele
<u>CA Department of Fish and Game</u> Member Marija Vojkovich Alternate John Ugoretz	<u>Business</u> Alternate Capt. Manfred H.K Aschemeyer
<u>CA Coastal Commission</u> Alternate Steve Hudson	<u>Conservation</u> Member Linda Krop Alternate Greg Helms
<u>Department of Defense</u> Alternate Walt Schobel	<u>Recreational Fishing</u> Member David Bacon Alternate Merit McCrea
	<u>Education</u> Alternate Dan Powell
	<u>Public-At-Large</u> Member Phyllis Grifman
	<u>Chumash Community</u> Member Paulette Cabugos

Absent:

<u>Government Representatives:</u>	<u>Community Representatives:</u>
<u>US Coast Guard</u>	<u>Chumash Community</u>
Member Ronald Fien	Alternate Reggie Pagaling
<u>Minerals Management Service</u>	<u>Public-At-Large</u>
Alternate Dr. Ann Bull	Member Matt Lum
<u>CA Resources Agency</u>	Alternate John Rennell
Member Brian Baird	Member Eric Kett
Alternate Amy Boone	
<u>Ventura County</u>	<u>Tourism</u>
Member Lyn Krieger	Member Lauri Baker
Alternate Marilyn Miller	
<u>NOAA Fisheries</u>	<u>Business</u>
Member Mark Helvey	Member Bill Spicer
Alternate Lyle Enriquez	
<u>National Park Service</u>	<u>Commercial Fishing</u>
Alternate Gary Davis	Member Jim Marshall
<u>CA Coastal Commission</u>	<u>Education</u>
Member Barbara Carey	Member Barbara LaCorte
<u>Santa Barbara County</u>	<u>Research</u>
Member Dianne Black	Member Dr. Bob Warner
Alternate Michelle Gibbs	Alternate Bernardo Broitman
<u>Department of Defense</u>	
Member Steven Schwartz	

Attendance

12 of the Council's 21 voting seats were present at roll call, subsequently increasing to 15 voting seats, and then dropping back to 12 voting seats later in the afternoon. The total number of Council representatives (members and alternates) peaked at 21. Public attendance varied from 5 to 9 people.

Administrative Business and Announcements

In her capacity as Vice Chair of the Sanctuary Advisory Council, Linda Krop, filling in for an absent Dianne Black, convened the meeting and served as acting Chairperson for the day.

New Members

Linda Krop introduced Paul Michel, Monterey Bay NMS's new Superintendent, and invited him to say a few words about himself. Paul stated that he has been on the job for two months and is still learning a lot. Paul explained that he came from EPA and has experience on coastal issues. Paul also mentioned that he recently attended his first MBNMS Advisory Council meeting, and added that it was great to have Mike

Murray there to speak about how the CINMS Advisory Council develops an annual work plan. The MBNMS plans to adopt this procedure, Paul said.

Meeting Notes

The May 18, 2007 draft meeting notes were unanimously adopted as final, after minor revisions proposed by Capt. Manny Aschemeyer.

Council Member Announcements:

Walt Schobel announced that on August 2nd helicopter search and rescue operations by the Airforce will be discontinued at Vandenberg Air Force Base and this operation will be conducted by the Coast Guard.

Marija Vojkavich announced that the California Fish and Game commission will be meeting in Santa Barbara on August 9th and 10th.

Fred Piltz announced that he was asked by Mike to bring a recently released synthesis report on alternative energy. He did not bring extra copies of the report because it is very large but he does have the web address and invited Council Members to see him for the address. Fred continued that MMS will be submitting a proposal for the Coastal Impact Assistance Program. Quite a few interesting projects will be proposed. Fred announced the comment period for the report of the West Coast Advisory Panel, which closes on August 1st.

Capt. David Bacon announced that this is turning out to be a good fishing year. There are lots of pelagic species on the back side of Santa Cruz Island, including yellow tail and white sea bass. Capt. Bacon added that white sea bass is not on the list of pelagic species but he wishes it was so it could be fished in Conservation Areas. Thresher sharks are also abundant.

Bruce Steele gave an update on water quality for agriculture. Bruce is on a water monitoring committee that oversees testing for the effects of agriculture on water quality from Salinas to Carpinteria. Tests are performed for different water quality parameters, for example turbidity and algae growth. In the initial study, they got regular "hits" on ceredaphnia. In 2006 and 2007, results have shown that when there is a zero survival rate there is also a signal for organophosphates at levels that exceed toxic standards. The major causes for those toxicity events are diazinon and chlorpyrifos. Results indicate that the dilution rate (i.e. river flow) would have to be 10 to 100 times what it currently is for these chemicals to be at safe levels. The biggest problem areas are the Salinas, Santa Maria, and the lower part of Santa Ynez riversheds. Bruce serves on the monitoring committee, but there is another committee that addresses best practices.

Carolyn Greene announced that captive-raised Island foxes were released on San Miguel Island this week and this is a great milestone for this program.

Phyllis Grifman announced that she attended an offshore aquaculture siting meeting at Long Beach aquarium recently. The meeting was both interesting and confounding because so much information was presented. In attendance were mostly advocates for aquaculture. There were some sitings for facilities proposed but the Santa Barbara Channel was not among them. Few people are interested in developing aquaculture facilities in California because of regulatory issues and the absence of hatcheries. Collaborating with Sea Grant Programs in California, Oregon and Washington, USC Sea Grant is organizing a meeting at the Southern California Coastal Waters Research Project on September 18. The purpose of the workshop is to gather wide stakeholder input on the research and information needs for the West Coast Governor's Agreement on Ocean Health. All are welcome. Other meetings in California include Eureka on October 24, Santa Barbara on November 15 (most likely) for the tri- county area, and

San Francisco (TBD). There is also an on-line survey available to collect input on research and information needs (<http://www.usc.edu/go/seagrant>) and all are encouraged to take part in this effort.

Channel Islands National Park Superintendent Russell Galipeau announced that Island Foxes are making a remarkable recovery. The bald eagle chicks fledged a few weeks ago. That is only the second time that bald eagles have been hatched and fledged at the islands in over 50 years, and it is a great milestone. Also, the kelp forest video and outreach program, "Channel Islands Live!" in partnership with the Ventura County Office of Education has now perfected the data link from the island to the mainland and the park is almost ready to project the program live into the auditorium. They are just waiting for one more link so that they can go live into classrooms in Ventura County schools this fall. The "From Shore to Sea" lecture series that is sponsored in partnership with the Sanctuary and Santa Barbara Maritime Museum is now broadcast in Ventura on the Public Access Network one to two weeks after the lecture. The build up to the National Park Service (NPS) Centennial in 2016 includes an initiative for public-private matching grants. Russell encourages anyone who wants to do work in a National Park to look into this, because there may be good opportunities for private partner matches. They are currently looking for projects for 2009. The next budget currently looks good for NPS, but is subject to changes just as the NMSP budget is.

Scott Young announced that the Coast Guard Marine Safety Detachment (MSD) in Santa Barbara has forwarded a proposal for inclusion of a Sanctuary Advisory Council representative from another Coast Guard unit that deals more directly, and full-time, with "living marine resources" and sanctuary-related issues. Ideally MSD Santa Barbara would provide the alternate seat. The new member would most likely be from the USCG Pacific Area office in Alameda, where they have a more regional view of issues relevant to the sanctuary.

Capt. Manny Aschemeyer announced that Homeland Security Secretary Michael Chertoff is in Long Beach this morning to discuss security of ports. There has been no specific threats but there are concerns of security scenarios because ports handle so much of the nations' economy. There will be a press conference today. Port security is a vital concern and there is a focus to do more than what they are already doing, even though they have been increasing security.

Linda Krop announced that the governor of California did not approve the Cabrillo Port LNG project and it will not go forward. However, another LNG project, the Clearwater Port project, has been proposed and it is even closer to the sanctuary. The state has determined the permit application is complete and we are waiting for a federal determination.

Superintendent's Report:

Sanctuary Superintendent Chris Mobley highlighted several items in the Superintendent's Report (provided to all SAC members and the attending public and available at <http://www.channelislands.noaa.gov/sac/super.html>).

CINMS Announcements:

Chris Mobley introduced Crystal Lowe, the Sanctuary's 2007 Hollings Scholar from the University of Alabama, where she is majoring in Chemical and Environmental Engineering. Chris explained that Crystal has been working with the Southern California Coastal Water Research Project (SCCWRP) on a water quality project that examines DDT contamination. Chris also noted that the Hollings Scholarship program is very competitive, and CINMS is fortunate to have her working with us.

Chris announced that although the NOAA budget news has been grim lately, there has recently been some good news. A House of Representatives subcommittee budget mark has come in, and for the NMSP it reflects about a doubling of what it has been provided in recent years. Chris added that if

any SAC members or others had recently called Congressional representatives and told them that you like what the sanctuary is doing, then perhaps it is working. Chris noted, however, that current events can affect the budget on a day to day basis and so the numbers could easily change. But, he said, at least right now at this point in the budget cycle we are at a good starting point.

Chris also announced that Dr. Steve Katz has been hired as the CINMS Research Coordinator. Chris explained that Steve has a background in NOAA Fisheries where he has worked on salmon issues. This hiring will really help our research department, Chris said. Chris also noted that the review committee felt Steve had some really valuable qualities, an excellent resume, and that he would be a great addition to the CINMS staff.

Chris highlighted some of the Sanctuary's volunteer activities, including summer fairs and local community and children's events. He commented that there are lots of opportunities to get involved, so please contact us if you are interested in volunteering or participating.

Aquaculture Presentations

Before beginning presentations on Open Ocean Aquaculture, Linda announced that there was in attendance a group of four graduate students from UCSB's Donald Bren School of Environmental Science and Policy. The students, who were enrolled in an environmental media course, introduced themselves and asked if the Council would be comfortable with them filming some of the meeting. They explained that they were attending to get ideas for their film project, which may be about aquaculture. There was no objection to their filming expressed by Council members.

By way of introduction to this agenda item, Mike Murray (Advisory Council Coordinator) explained the almost two-year process that it took to get to this point, including previous presentations by the Conservation Working Group, the submission of and commenting on a draft report, and the plan to have an aquaculture panel. Mike explained that while there had been a budget delay which in turn caused delays in getting to this point, it had all finally been worked out.

Mike then introduced Corey Peet from Monterey Bay Aquarium, explaining that Cory is a marine ecologist specializing in sustainable aquaculture. Cory has a master's degree from the University of Victoria in Canada. For his master's thesis he studied the interactions of salmon farms, sea lice, and juvenile salmon. Corey has been invited to speak to the Advisory Council about the science of aquaculture.

Mike also noted that both presenters had been asked to present just facts, not advocacy positions, and had agreed.

Corey Peet

Corey provided a background on his studies and stated that during his graduate work, and continuing with his work now, he has learned a lot about issues of science and politics of aquaculture. He has now been involved in the issue for about 5 years. Corey stated that his presentation will be about the science and risks of aquaculture.

Corey made the following points in his presentation:

- There are risks and benefits of aquaculture and it is important to understand the "why" and "how" of aquaculture. There is a difference between terrestrial and marine aquaculture, mainly that terrestrial aquaculture involves herbivores, while marine aquaculture involves carnivores or omnivores.

- The “why?” of aquaculture can be explained by the rising consumption of seafood while fisheries and fisheries models cannot keep up with demand. There has been a decline in the abundance of fish available for consumption, according to a graph shown from 1999.
- The “how?” of world aquaculture is diverse. Because there have been real detrimental impacts of salmon farms, some people have the impression that aquaculture is bad. However, it could be sustainable. Mollusk and carp account for ¾ of aquaculture. Marine finfish is where growth may occur but it is a small part of the current market. Aquaculture accounts for almost 50% of the supply in the market and we are likely to see it go up. Globally, 90% of this aquaculture is seaweed and mollusk. In the US, market growth is in open-penned carnivores, such as tuna.
- Aquaculture needs to address the issue of sustainability, which includes economic, social, and ecological. In aquaculture, the ecological aspect of sustainability has been left by the wayside and now we must pay attention. Ecological sustainability can be defined as “maintenance of natural capital” and an integration between aquaculture production and affected ecosystems.
- What are the ecological issues? They are: fishmeal and fish oils in feeds, risk of escape, risk of disease transfer, wastes and pollution, and interactions with predators. Each issue will be addressed further.
- Fishmeal and fish oil. By 2010 aquaculture will use 50% fishmeal and 97% fish oil. Feed efficiency (the ratio for the amount of feed it takes to produce the harvested biomass) is improving but is still problematic for carnivorous species. Tuna estimates are as high as 30:1. You may hear the industry say that there is a 1:1 ratio, but that is the feed ratio, not the feed efficiency ratio, and it doesn’t take into effect full costs. However, feed efficiency in some species is improving. It is key to consider is what the effect of feeding animals in aquaculture has on ecosystems. The single species management ideal is traditional, and works with tuna aquaculture management because they are very high up in the food chain, but it is more challenging with small pelagics, such as anchovies, sardine, and herring, which have important roles in ecosystems.
- The conversion rates of fish meal are not a 1:1 ratio. Conversion rate of wild fish incorporates waste, escapes, disease and carbon issue. All of these have to be factored in to make a true comparison to farmed fish (shows a graph from Naylor and Burke 2005).
- There are options to mitigate this issue such as using sustainable fisheries byproduct, although there is a potential contaminant issue with that option. Another option is to replace fish meal and oil with plants, including soy or algae, or GMO feed. Another option is to consider the choice of the fish to be farmed. For example, barramundi requires less fishmeal than other carnivorous species.
- In summary of the sustainable feed issue, it will depend on three factors: sustainable reduction fisheries, the needs of the fishes physiology (fish require some meal or oil for survival) and the tolerance of the human palate (if fish are fed plants they taste different).
- The next risk to consider is the risk of escapes. This is a critical conservation issue. Introduced species are a leading cause of species loss. Farmed salmon that have escaped from British Columbia or Washington have been caught in Alaska.
- One risk of escape is hybridization of farmed animals with wild animals. Farming native species with different genotypes can have impacts on adjacent wild populations, such as reduced spawning success and depression of the population fitness.
- To minimize risk of escape, it is necessary to acknowledge risk and to protect against it. It is necessary to insure the genetics of escapes resemble that of wild, so that if there is escape it will have less impact. Insights from evolutionary theory and invasive species biology must be brought to bear.
- The next risk of aquaculture is the risk of disease transfer, and it is probably the most important local impact with pen culture. Many diseases are hard to identify and study. Disease is controlled by natural feedback loops and aquaculture can amplify affects and mortality levels.

- One example comes from sea lice and salmon farming. Wild salmon infect farmed salmon on their inbound migration to spawning creeks. When wild salmon swim by farms they infect farms. Then the sea lice have lots of habitat to grow in during the winter in the salmon farms. Then, when wild salmon juveniles swim out towards the ocean from the creeks in the spring, the wild salmon get infected by farmed salmon. These young salmon are very susceptible and vulnerable to disease at that life stage.
- Disease is toughest to mitigate because of so many unknowns. The density, flow, and migration routes should be considered in siting aquaculture facilities.
- One potential solution is polyculture, which is the culture of fish along with seaweed and mollusks or other shellfish. Treatment of aquaculture facilities are another possibility.
- The next risk to consider is nutrients and pollution. As currently practiced, farming operations will produce biological and chemical waste. Studies show that waste can have local effects on species diversity and ecosystem function. A single farm can produce as much waste as a city of 65,000 people.
- Ecosystem modeling is needed to guide industry expansion. Dilution is not the solution to pollution. The assimilative capacity of ecosystem and cumulative impacts need to be understood. Small pilot projects need to be considered before scaling up to larger projects. Modeling techniques can help understand the effects.
- Again, the most promising mitigation for pollution is polyculture. The leading research on this topic is in eastern Canada. There, researchers have found that polyculture can remove 60% of aquaculture waste. Appropriate siting in areas of high water flow, of an appropriate scale, and increasing use of technology to reduce excess feed inputs by monitoring with cameras can all help to reduce pollution.
- Corey showed a short video of Canadian researchers. The researchers are harvesting mollusks and seaweed from an aquaculture facility and explaining how these organisms help “scrub” the nutrients and waste from the salmon pens. Results from this research show that conditions are better for the fish, seaweed, and mollusks, and the surrounding ocean. This method has been used by the Chinese for thousands of years with success. However, recently the Chinese are shifting to monoculture, possibly for economic reasons. It is thought that polyculture may be more economically sustainable than monoculture.
- Another risk is the interactions with other species. For example, marine mammals may be attracted to aquaculture facilities for food. Acoustic devices have been used to deter sea lions. This can cause deafness in sea lions and change the migration patterns of killer whales. Sea lions have been found entangled in predator nets. It is difficult to find mitigation strategies for these issues.
- In summary, from an ecological view, there is a need to achieve the following:
 - *For Feed: A net producer rather than consumer of edible fish protein*
 - *For Escapes: No risk of deleterious effects on wild fish and ecosystems*
 - *For Disease: No risk of deleterious effects through amplification, transmission or introduction of disease/parasites*
 - *For Waste: Treat and reduce discharge to ensure no adverse impacts to surrounding ecosystem; use of polyculture*
 - *For Management: Utilize a precautionary approach for daily operations and industry expansion*
- Other considerations include the energy use and carbon footprint of aquaculture facilities, and the full cost of accounting on all impacts (cradle to grave).
- The future of aquaculture in the US is likely to involve carnivores because of the profit potential and the high cost.
- “Rigs to Reefs” may present a vector for disease.
- The risks of aquaculture present the opportunity to set the bar for sustainability in the industry in the US.

In response to questions, Corey stated:

- The species in polyculture are probably not native species
- Aquaculture refers to both freshwater and marine cultures, mariculture is only marine. The word seafood sometimes includes freshwater species such as catfish.
- In Canada, the products of polyculture are permitted to be sold. Research has shown that they are below contaminant levels, but there is some discussion about whether those levels are set at an appropriate level.
- Using submerged versus open nets probably doesn't change the risks that much, but could mitigate species interactions. However, it would still affect the surrounding area.
- There is a lot of confusion about the word sustainability. It should be a balance of ecological, economical, and social sustainability.
- Although other industries may not be held to these standards, that doesn't mean that we shouldn't hold a new industry to appropriate standards. Open ocean aquaculture is a different system with predators, not just omnivores.

Jim Sullivan

Mike Murray introduced Jim Sullivan from Silver Spring MD, who is program analyst with the NMSP and resident expert on aquaculture. Jim last visited the CINMS Advisory Council in 2004.

Jim's presentation including the following points:

- NMSP has no for- or against-stance on aquaculture. The NMSP permits and regulates certain activities but does not have an opinion.
- Jim was an author on a book chapter that dealt with the culture of mixed species in a pond in China. The project was not successful, but a good learning experience and Terry Chopin (the researcher viewed in the video in Corey's presentation) has now worked out some of those issues.
- Aquaculture is defined as the propagation and rearing of aquatic organisms in controlled or selected aquatic environments for any community, recreation, or public purpose.
- Why aquaculture? NOAA's Admiral Lautenbacher testified before Congress on Aquaculture and his quote can be summarized as "natural supply can not meet demand, therefore aquaculture is needed to fill the gap". Worldwide aquaculture is a large market, but the US has small share of the market. The US imports seafood, and open ocean aquaculture is an economic opportunity for the US. There is an \$8 billion trade deficit in seafood. The US can set standards to insure food safety.
- NOAA leadership has a strong opinion on aquaculture.
- Chinese production of aquaculture is more than three times the net production of the next 12 countries combined. The FDA recently banned the import of some Chinese fish because of food safety concerns.
- Department of Commerce (DOC) Aquaculture Mission: "to create sustainable economic opportunities in aquaculture in a manner that is environmentally sound and consistent with applicable laws and Administration policy."
- DOC Specific objectives by 2025: increase value, improve production, safeguard the environment, enhance depleted wild fish stocks.
- NOAA is the primary federal agency working on marine aquaculture under the National Aquaculture Act of 1980.
- The NMSA mandates that sanctuaries must be managed to allow for private and public use, to the extent compatible with resource protection.
- With this mandate in mind, regulations have been promulgated as deemed necessary to protect the resources within sanctuaries.
- Current NMSP regulations relevant to aquaculture include: CFR Title 15 Section 922: prohibitions on altering the seabed and discharge of material.

- Other applicable regulations at some sanctuaries may include: no commercial fishing, limits on vessel operations, exotic species introduction prohibition, prohibition on damage to sanctuary resources, prohibition on “enter and injure.” These are indirect ways that aquaculture may be prohibited in some sanctuaries.
- Proposed regulations in CINMS’ draft management plan the Joint Management Plan Review of Monterey Bay, Gulf of the Farallones, and Cordell Bank National Marine Sanctuaries may also indirectly prohibit aquaculture.
- There is legislation currently before congress, including: The National Offshore Aquaculture Act of 2007. There was a hearing on HR 2010 held on July 12 2007. These drafted legislations may be changing but they are being discussed currently. Now is the time to weigh in on it if you are interested. Contact your representative.
- In addition, recent position statements have been given by: White House Administration (Jim Connaughton – White House CEQ), DOC (Sec. Gutierrez), and NOAA (Vice Admiral Lautenbacher). The general sentiment of these statements is that we subsidize aquaculture in other countries (by importing) but have no say in their environmental standards and regulations.
- The 2007 Aquaculture Summit was 2-day event recently held by the Aquaculture program of NOAA and NMFS. The issue of the summit was, “how can we make aquaculture happen and what are the issues of concern?” Jim Connaughton stated that the number one priority for this administration is the National Offshore Aquaculture Act. The message was clear that open ocean aquaculture is coming. Sec. Gutierrez and Vice Adm. Lautenbacher made similar statements and they were backed strongly by the Administration. However, it is unclear whether Congress will support the proposed legislation. Congress did not support a previous bill, but there is a lot of momentum with the issue currently.
- The policy issue for the NMSP is mainly the compatibility of aquaculture with resource protection in sanctuaries. Sanctuaries manage about ½ % of the nations EEZ (excluding the recently designated Papahānaumokuākea Marine National Monument) and some sanctuaries are considered prime real estate for aquaculture.
- The regulatory prohibitions that the NMSP currently has are indirect. There was a recent proposal by Rep. Woolsey of CA to expand the Gulf of the Farallones and Cordell Bank national marine sanctuaries, and specifically prohibit aquaculture.
- Another issue is the privatization of the national marine sanctuaries; considering such areas as being set aside and long-term leased for individual profit.
- However, the NMSA is clear: the bar is set very high, and sanctuaries are not in the business of promoting aquaculture. The permit process is in place to handle applications of all kinds.
- The next steps for the NMSP are to develop permitting guidelines and to establish the level of scrutiny that would be required under the NMSA.

In response to a variety of questions, Jim Sullivan explained the following:

- In response to Bruce Steele pointing out that Thailand and Vietnam has converted massive amounts of mangrove area for purposes of creating shrimp farms, and as such closing the US seafood deficit may not be possible, Jim commented that China is the leader for aquaculture imports, even if you include shrimp imports (which have a low tonnage per cost ratio; tonnage was shown on Jim’s graph). The US has tried unsuccessfully to have shrimp farming. The growth in US aquaculture will likely be in carnivorous fish, not in shrimp farming.
- In response to questions from Marija Vojkovich about permit criteria, Jim explained that the NMSP does not and will not have specific numeric thresholds for any permits, including water quality or aquaculture. Rather, the permit guidelines will identify issues that the NMSP would want the applicant to provide very specific information on. However, the NMSP would also refer to applicable existing standards such as EPA standards for effluent.

- Sanctuaries are set aside as areas of significance and need special protection from threats that aquaculture may bring. However, there is an NMSP white paper on this, begun about three years ago and still not complete, which addresses aquaculture standards.
- The proposed federal Aquaculture legislation does not specifically prohibit aquaculture from any specific site or area. There are obvious places where aquaculture wouldn't occur, and other places that are arguable. There is some concern that the proposed Act does not propose environmental regulations but rather leaves it to be promulgated after the Act is enacted.
- NOAA has been discussing how projects outside of sanctuaries could still affect sanctuaries.
- States have an opportunity to opt out of the proposed federal legislation, which would then prohibit federal aquaculture within 12 miles of the state. This provision was added because some states opposed the 2005 proposed legislation.
- The proposed federal legislation only has jurisdiction in the US EEZ.
- The proposed federal legislation as currently written does not include regulations on fishing in MPAs to supply aquaculture facilities. It provides a process for developing those regulations.
- The proposed federal legislation would make NOAA the primary agency for aquaculture permitting. It doesn't eliminate existing regulations such as MSA or NMSP. There has been a series of meetings in NOAA that looked at the requirements for permitting.

Questions and discussion was then opened up to both Corey Peet and Jim Sullivan. In response to a variety of questions, Corey and Jim gave the following answers:

- Corey stated that there are critical flaws in the industry. Loopholes in other countries allow the harvest of juvenile and adult bluefin, which hits them at both parts of their lifecycle.
- Jim stated that the states' opt-out option in the proposed federal legislation is not specified.
- Jim stated that there is nothing in the proposed legislation to differentiate ranching versus farming (ranching is catching adults and growing them in pens, farming is using hatchery raised individuals).
- Corey stated that not only should there be a rethinking of what species are sustainable, but if the demand itself is sustainable.
- Corey stated that there have been several "closed system" aquaculture facilities tested for salmon. It has not been proven to be economically viable, but has potential. However, it does not solve the problem of feed, and of the energy needed to run the pumps.
- Corey stated that aquaculture site selection has often been driven by economic factors, such as access by vehicles, and some biological considerations, such as the likelihood of algal blooms.

Conservation Working Group Aquaculture Report

As Chair of the Conservation Working Group, Linda Krop explained that the CWG has been working to help the Sanctuary address a variety of resource protection issues. She described how the CWG has produced a series of reports and recommendations, the first being a report on acoustic impacts, the second addressing water quality, and now the third addressing aquaculture. Linda explained that this is the 4th advisory council meeting at which the Council will have discussed the CWG's aquaculture report. She commented that a draft report was first presented to the advisory council in January of this year, and that the CWG asked for advisory council input. In March, Linda explained, Shiva Polefka brought back information on comments he had heard up to that point. Then in May, Linda described, Shiva provided an update on efforts to work with reviewers to fine tune the report and address comments. Linda summarized that the report's recommendations are pertinent to sanctuary resource management, and would be handed to the Sanctuary Superintendent as advice, not binding.

Linda explained there are three main themes to the report:

- Open ocean aquaculture is most likely to occur outside the sanctuary given sanctuary regulations (although Jim explained today that a permit could conceivably be issued), yet such projects could affect the sanctuary
- Deliberate versus opportunistic project siting is important
- The types of standards that should be considered in the context of protecting sanctuary resources

Linda also explained that the report is neither for nor against aquaculture.

Linda provided a handout summarizing the report's recommendations.

Chris Mobley explained what would happen if the advisory council adopted the report. The report is a form of advice, he said, which if adopted by the council would be advice from the council as a whole. Advice from the whole council represents a diverse array of interests and is meaningful to the sanctuary and NOAA. CINMS and the NMSP take the sanctuary advisory council process seriously. Advisory council advice is also taken seriously up the line within NOAA. Early drafts of this report were vetted within NOAA, and received a lot of comments and raised a lot of eyebrows. The report adopted by the advisory council as a body will influence the sanctuary and NOAA. This advice would be one information source among many. The analytical work done by this body gives CINMS a big head start should an aquaculture project emerge within the vicinity of the Sanctuary. Chris thanked the Conservation Working Group and the advisory council for their partnership and contribution to addressing this issue.

Linda thanked advisory council members who had provided input on the report and noted that comments from Bob Warner (who could not attend today's meeting) and the Research Advisory Panel had been incorporated into the final report. Shiva Polefka reiterated this thanks, and explained a few minor changes to the report since May focused on clarifications, namely in response to comments from Bruce Steele and Capt. David Bacon. Shiva noted there is one substantive change regarding recommendation 6 on page 43, which includes a sentence about the Woods Hole Oceanographic Institute panel, after which there is a now a new sentence incorporated about displacement of other activities.

Speaking to an issue of process, Paulette Cabugos said that she asks herself what Billy Frank Jr. would think about this. Paulette asked if the federally recognized tribe was consulted in this process. Chris Mobley explained that this is a product of the sanctuary advisory council, and as such it is just advice that does not constitute a federal action. If the sanctuary decided to make a decision or take an approach, then tribal consultation could be triggered. Paulette asked if it would be better for them to draft a recommendation letter of their own. Chris said if Paulette strongly disagrees with the report, she should state why. In this situation, he said, we are talking about how the SAC as a whole wants to give advice to the Sanctuary.

Council members engaged in extensive questions, comments and discussions, which will be more fully described in forthcoming draft meeting notes, focused making final edits to the report's recommendations. Linda Krop summarized the variety of suggestions made, which called for the following edits to the report's recommendations:

1. Change second clause of 1st sentence in recommendation 1 to remove the word "minimization" and replace it with "...staff and stakeholders should support the ensuring of economically, ecologically, and socially sustained use of wild fish inputs...."
2. Recommendation 2, in the 1st sentence replace "fish" with "aquatic plant and animal species (including specimens of non-local genetic stock)"
3. Change 1st sentence of recommendation 4 language to say "...array of current and potential future aquaculture approaches... These may include"
4. recommendation 10, delete "rather than as a subsumed member of NOAA"

5. Captain Bacon's clarification on p. 43 regarding the issue of potential conflicts with existing uses.

Captain Manny Aschemeyer made a motion to accept recommendations as amended here today. Phyllis Grifman seconded the motion. A roll call vote was taken by Mike. The motion passed 15-0, with no abstentions. Paulette voted yes, but noted that she would like to continue conversations pertaining to a government to government consultation.

Shiva concluded the discussion by offering to provide advisory council members with a written summary of the final changes advisory council members voted to adopt during today's meeting. [Post-meeting update: this and the final report are now posted on the CINMS web site here: <http://www.channelislands.noaa.gov/sac/news.html>]

Chumash Community Presentation

Mike introduced Paulette Cabugos and thanked her for providing this presentation to the Advisory Council. Paulette thanked everyone for being here and giving her this opportunity.

Mati Waiya provided a blessing, and Mati and Roberta Cordero sang a traditional island song.

Paulette discussed the history of the Chumash people, and noted that before the arrival of the Spanish there were not people studying them, and people in a government on the east coast regulating them. Showing paintings on slides, Paulette described that there were springs, creeks, and rivers. Ancestors created water monitoring, and dug wells. Paulette noted that in the last few weeks she has been reading a report given to her by Roberta Cordero, which states that in 1769 when the Spanish began settlement of California there were at least 150 separate entities in the region, none of which considered themselves as part of the same tribe, rather they considered themselves as sovereign nations. This is how they have regarded themselves since the beginning of time. No one person can speak for all of the people. Paulette explained the territory of the Chumash people, referred to by the Spaniards as the Obispenos, Purisimenos, Barbarenos, Venturenos, and Inesenos. The word Chumash was later used by mainlanders to refer to islanders. Later ethnographers referred to all native people in the region as "Chumash." In 1850 when California became a state 18 treaties were negotiated, but none of the groups in the Channel were given the opportunity to sign treaties. Only one group was assigned an agent in 1854, Cieneguitas. As a result of this representation we have "Hope Ranch" today.

Paulette described the way the native people learned the balance between the lives of people and nature. She said they have an obligation to protect their language, dances, stories and ways. Elders have triggered an ancestral awakening. There was a quiet awakening in the 1970s with the Brotherhood of the Tomol. The tomol represents physical and spiritual connection to the universe. Roberta co-founded the Chumash Maritime Association after she moved back to the area in 1995. Last year was the first time that the elders of the Brotherhood of the Tomol were present for the crossing. This year will be the fifth year of the crossing, supported by CINMS. Paulette thanked the Sanctuary Superintendent, and also noted that the Park and other people have been involved. She said that the crossings have been an awakening for not only Chumash people, but for friends as well.

Paulette recounted Roberta's work to establish a Chumash seat on the advisory council, and she acknowledged several other elders. She noted that we are all concerned about the health of our environment and our future. She said they are grateful for the support, and noted that we have much work to do together, and some apart. She indicated that one of the things she has learned from the advisory council is how much money it takes to manage the marine environment.

Paulette said as they experience the revival of the blessed tomol, so too they experience the revival of their way of life.

Paulette then introduced Mati Waiya. Mati described a dream, vision, and desire, represented in the Chumash village demonstration site on the Malibu coast at Nicholas Canyon. He worked with the Santa Monica Mountains Recreation Area and the National Park Service, and it was inspiring to see people finding a way to reconnect to the environment. He showed pictures of willow and thule reed, and beadwork made locally, and French and Russian trade beads, clams, mussel, and abalone. They are close to having 3 dwellings finished at the site in Malibu. They constructed a dance area, removed invasive plants – where there are red legged frogs, endangered western pond turtles. They will be planting native plants. They have had numerous visitors, including boy scouts and girl scouts. As a member of the Water Keeper Alliance they are engaged in several law suits. They have schools visit, and collect thule. They are building 12 aps (traditional houses) in total, and use whale bones and vertebrae. He described efforts of several people who have contributed in personal ways to the features of the village site. He acknowledged that there is a government to government relationship, and it is mandated that there be this communication, including about fisheries, and how many fish can be caught.

Mati explained that they are working with maritime coastal people to start other Water Keeper groups, and to discuss tribal marine protect areas. Mati thanked Paulette and Roberta. He said Sunday (July 22nd) the tomol paddlers will be practicing near the village site, and he welcomed advisory council members to come visit.

Roberta Cordero noted that when they built the first tomol in 1997 it was using a grant from the National Marine Sanctuary Program. She said both that experience, and the relationship with the Park, have been very positive and valuable. Roberta explained that Paulette was also a founder of the Chumash Maritime Association. It took them nine months to build the tomol ‘Elye’wun (swordfish). She said there is a lot of interest and so they need to build more tomols. Roberta thanked Paulette for being a continuing presence here and offered support for Paulette.

Scott Dunn recalled finding a paper about a cultural sanctuary (Tribal MPAs), which the Wishtoyo Foundation had produced, and said it was great.

Linda asked when the next crossing is, and Roberta explained it is the weekend after Labor Day. Linda asked if the staff could send an announcement to remind people about it. Mike said he would talk to Paulette about that.

Roberta introduced a plant song that she first learned about as a sourdock song, which is not medicinal but is used to bring medicine out in other plants. In terms of people dedicated to “bringing the medicine out” she offered the group this song. She noted that she learned from a friend that they also have this song and call it the mountain mahogany song.

Linda thanked Paulette, Roberta and Mati for their presentation.

CINMS Marine Zoning: Federal Process

Sean Hastings, CINMS Resource Protection Coordinator, updating the Council on the federal process to complete designation of marine reserves and conservation areas within the Sanctuary. Sean explained that the federal waters portion of the network should take legal effect on or about July 27th, depending on

whether on the Congressional calendar. There will be a final notice about completion of the federal waters portion published in the Federal Register.

Sean explained that the gap areas between the state and federal zones still exist, and with regard to the “open record” on this part of the network NOAA is accepting comments through Monday July 23rd. If the state should close those gap areas, Sean said, then NOAA will subsequently issue a notice that the NOAA record and rule on this is closed. Sean also stated that if the state decides not to close the gap areas, then NOAA will take action to do so. All indication suggest, Sean added, that the state is moving forward on this.

Council discussions included the following points:

- Greg Helms characterized the piecemeal process to complete the network as rather chaotic, especially with respect to the gap areas.
- Merit McCrea questioned why NOAA felt it needed to “hold a hammer” over the state’s head with regard to closing the gap areas.
- Steve Hudson reminded the Council that the California Coastal Commission, through their coastal zone federal consistency determination process, is the source of pressure upon NOAA to make certain that the gap areas are incorporated into the network.
- Andrea Moe asked if the next restocking/reprinting of the popular Protecting Your Channel Islands brochure would be on hold until the whole MPA network is in place. Sean explained that there will be interim one-pager products made available on the web and elsewhere to explain the status of the network prior to the gaps being closed, and that CINMS would initiate printing of the next version of the brochure once the Fish and Game Commission votes on this in October.
- Scott Dunn commented that regardless of who closes the gaps, completion of the network seems inevitable. He suggested that perhaps the gap areas could be depicted with hash-marks? Sean confirmed this to be the regulatory intent, and Chris Mobley added that because brochures are expensive to produce he does not want an interim brochure created.
- Russell Galipeau suggested that a fold-out map of the whole network should be included in the State’s fishing regulation booklets. John Ugoretz suggested this might be possible next year, but not as a supplemental for this year. John characterized the Protecting Your Channel Islands brochure as the state’s main product for this.
- Linda Krop asked why NOAA is not moving first to close the gap areas, to which Sean Hastings explained that the state, via the Secretary of Resources, made it very clear that it would not be supported. Chris Mobley added that originally it was thought that the gap areas would only exist for a short period of time, but now it looks like about 6 months.
- Linda Krop asked if there was any interest in having the Advisory Council send comments to NOAA with regard to the gap-closing issue. No interest was expressed. Linda clarified that individuals and other groups could do so, but would need to meet the comment deadline of July 23.

CINMS Marine Zoning: State Process

John Ugoretz with the California Department of Fish and Game explained the process that the state has underway to close the gap areas within the CINMS MPA network. On August 10, John said, the Fish and Game Commission will have a discussion hearing on the matter. It has been presented to the Commissioners, John explained, as a simple “close” or “no close” decision that needs to be made. On October 12 in Concord, CA, John said the Fish and Game Commission will hold an Adoption Hearing on this.

Assuming the Commission votes on October 12 to close the gaps, John explained that there would then be a few weeks spent preparing documentation for the state’s Office of Administrative Law (OAL). This

would then be followed, John said, by a 30-day review by the OAL, and then an approximately 30-day period for filing with the Secretary of State.

John explained that altogether, the post-Commission vote steps could take about 3 months, which would mean the gaps could be legally closed in early 2008, which would be 5 to 6 months after the NOAA Sanctuary regulations would have taken effect for the federal zones.

Council discussions and action followed, largely focused on what should be included in an Advisory Council letter to the Fish and Game Commission.

- Dan Powell asked about what sorts of boundary clarifications and modifications would be included in the package to be voted on by the Fish and Game Commission. John Ugoretz explained that shoreline boundary coordinates would be changed so that they connect with appropriate points on land at the mean high water line, and that the coordinate points used were being refined to use the third decimal place. John also mentioned that on-shore coordinates were being added at the mean high water line to help make it more clear where the shoreline corners are near Arch Rock (Anacapa Island) and Gull Island.
- Linda Krop suggested that a letter from the SAC to the Fish and Game Commission (CFGF) could touch on the Council's history of involvement, support incorporation of the gap areas, and possibly encourage strong partnership and coordination between CINMS and CDFG.
- John Ugoretz explained that in infrequent cases the state can proceed with an "expedited review" by the Office of Administrative Law, and that it can save about 30 days time.
- Russell Galipeau suggested that a SAC letter to the Commission should include a request for an expedited review, and noted that it would help with clarity and enforcement.
- Bruce Steele asked that a SAC letter to the Commission include language such as "in continuance of the goals and objectives reached by the Marine Reserves Working Group." Captain Bacon disagreed with Bruce that the MRWG had reached consensus, but Bruce clarified that he was talking about consensus being reached on goals and objectives.
- Greg Helms suggested that the Advisory Council ask the Commission to do something formal to support coordinated state and federal management of the MPA network, noting that there does not seem to be a naturally flowing partnership any more.
- Chris Mobley explained that there have been ongoing discussions between CINMS and the CDFG, and have started work on a Memorandum of Understanding (MOU). Greg Helms said that if the SAC could help move that along, then it would be worth mentioning in a letter.
- Bruce Steele said that it would be inappropriate for the SAC to say, at this time, that if the Fish and Game Commission doesn't act to close the gaps then NOAA will.
- Linda Krop summarized the main points of a possible SAC letter that she had heard the Council suggest. Bruce Steele then offered a motion that the Council approve such a letter, which was to be completed by the Chair and also communicated in person at the Fish and Game Commission meeting (in Santa Barbara on August 10). The motion was seconded by Phyllis Grifman.

Council Action: By a vote of 10-1-1, the **Sanctuary Advisory Council approved the writing of a letter by the SAC Chair to the California Fish and Game Commission (CFGF)**. Per the motion, the letter will: 1) mention the Council's history with the marine reserves process, including specific mention of the Marine Reserves Working Group's consensus on goals and objectives; 2) express Council support for closing of the marine reserve gap areas, and recommend that the CFGF request an expedited review; and 3) express Council support for completion of an agreement between CDFG/CINMS regarding management and implementation of the marine protected area network.

Voting results were as follows:

- 10 Yes (D. Powell, P. Cabugos, P. Grifman, R. Galipeau, S. Dunn, L. Krop, W. Schobel, S. Hudson, A. Moe, B. Steele)

- 1 No (D. Bacon)
- 1 Abstain (J. Ugoretz)

The letter will be completed by the Chair and, in keeping with Council protocols, emailed to Council members as a final draft prior to being signed and delivered. [Update: distribution of the final draft took place on August 2].

CINMS Marine Zoning: Enforcement Report by Channel Islands National Park

Jack Fitzgerald, Chief Ranger for the Channel Islands National Park, gave a presentation on the Park's marine enforcement program. In his presentation (slides available upon request), he covered the following information:

Introduction:

- National Park includes all four northern channel islands and Santa Barbara Island, and surrounding waters to 1 NM offshore
- Park waters approximately 125,000 acres
- 12 Marine Protected Areas established by State of California in 2003 cover about 20% of park waters
- NPS expanded the Marine Enforcement program in 2003
- Park Rangers are responsible for monitoring and enforcing regulations on both land and water within the park.

Ranger Staff:

- 7 Fulltime Park Rangers:
 - Island Rangers (Island Based)
 - Marine Protection Rangers (Ventura Based)
 - Federal Law Enforcement Officers
 - Deputized State Peace Officers
- 4 Seasonal Park Rangers in 2007:
 - Increased coverage during peak season

Enforcement Assets:

- Park has three Rigid Hulled Inflatable Zodiacs dedicated to marine enforcement and protection
- Currently working on purchase of larger dedicated marine patrol vessel

What regulations are enforced?

- Rangers enforce all applicable federal and state regulations
- Includes:
 - Fishing (Sport and Commercial)
 - MPA monitoring and enforcement
 - Park Service Regulations (includes PWC use prohibited, and Camping and Fire regulations)
 - Safety

Marine Patrol:

- MPA Enforcement, Education and Awareness
- Fishing Contacts
- Diver Contacts
- Boating Safety

Island Patrols:

- Observations of MPAs and anchorages from island
- Visitor use management
- Dogs (Pets)
- Fires

Aerial Patrols:

- Regularly scheduled fishery enforcement flights
- Complete MPA monitoring and enforcement
- Allows for patrol of all islands in a short period of time

Cooperative Patrols:

- Including: U.S. Coast Guard / California Dept. of Fish & Game
- Each agency has different capabilities and expertise
- Shared knowledge
- Improved working relationships
- Public perception
- Search and Rescue Capabilities
- Differing Laws

Marine Protected Areas:

- Awareness of MPAs by fishermen at the islands is high
- Most know of the MPAs, but may not be aware of exact locations beyond Anacapa
- MPA violations fall in three groups:
 - 1/3 have no knowledge of MPAs
 - 1/3 know about the MPAs but did not realize they were inside an MPA
 - 1/3 knowingly break the law

Marine Protected Areas - Observations from the field:

- Conservation Areas:
 - Confusing to recreational user
 - Where most MPA violations occur
 - Consider change to Reserves in future
- Marine Reserves:
 - Fewer, but larger –less boundaries
 - Use geographic landmarks at islands
 - No Anchoring with game

Marine Protected Areas - Trends over recent years:

- Increased marine enforcement effort over last 4 years
- Compliance and knowledge of regulations has increased (based on Ranger's field observations)
- 90% of MPA violation occur at AI and SCI
- MPA violations detected declined annual 03-06
- Penalties for repeat offenders and major violations have increased

Marine Protected Areas - 2007 Trends:

- Increase in Violations – All types
- Increase in MPA violations:
 - Scorpion Reserve
 - Anacapa Conservation Area
- Citations issued by July 2007 equal to yearly average for 2003 to 2006

Marine Protected Areas - Effects on Trends / Statistics:

- Staffing Levels
- Staff Knowledge
- Media Coverage
- Public Outreach
- Weather

Comparative Enforcement Effort:

- Jack explained a chart showing, for 2003-2006, the numbers for and trend of vessel contacts, persons onboard, marine patrol boat days, marine patrol ranger days, ranger patrol boat hours, boat patrol hours, patrol effort, violation notices, and warnings

Following Jack Fitzgerald's presentation, Council discussions included the following points:

- Former CINMS Superintendent Matt Pickett asked if marine Park Rangers could enforce other agency regulations beyond the Park's 1 nm boundary. Jack responded that this is not possible at this time, and for state regulations would require the Park's federal officers to be designated as state Wardens. To enforce beyond 3 nm, Jack said that a high-level of agency approval would need to be obtained, and Russell Galipeau added that more resources would be necessary in order to cover it.
- Scott Dunn asked if the Park was losing Rangers, to which Jack replied that, no, the Park has been doing fairly well in that regard.
- Capt. David Bacon commented that whenever Park Rangers approach his charter boat, they are always professional and courteous, and it is a pleasure to see them.
- Mike Murray asked what the Park advises people do if they see activity that could be a violation of law. Jack responded that it is OK to hail another vessel on Channel 16 and talk to them about it. It is helpful if people can get whatever information possible and contact Park dispatch [805-658-5720].
- Dan Powell asked about the extent of problems associated with fishing on the boundary line of MPAs. Jack said that this has not been too much of a problem, and that most incidents have involved vessels well inside MPA boundaries.

Public Comments

- Jessie Altstatt with Santa Barbara Channelkeeper noted that the most common violation they see is people on the north shore of Anacapa Island in the pelican closure zone. She mentioned that on the R/V *Shearwater* a few weeks ago they came across a boat in a reserve with six lines in the water, and when they asked if the boaters knew they were in a reserve their response was that they just bought the boat. Jessie suggested that there is a lot of opportunity for education and outreach.

Working Group Reports

Conservation Working Group (CWG). Linda Krop mentioned that the CWG had a meeting this week and discussed the aquaculture report and the federal marine reserves final rule.

Chumash Community Working Group. Paulette indicated that the Chumash Working Group is not having an official working group meeting, but there is a gathering in Malibu on Sunday July 22 at which Chumash community members will review the draft "film treatment" for a sanctuary documentary film.

Recreational Fishing Working Group. No report.

Research Activities Panel. No report.

Commercial Fishing Working Group. Bruce Steele said that fishery by fishery, commercial fishermen in Santa Barbara are starting to get pushed out. Halibut trawlers are now having to prove that they are not damaging the environment in order to fish. If we lose the halibut fishery we lose the last Castagnola. Bruce said he recently met with Mike McCorkle about trying to show some form of unity in Santa Barbara. He said it is important that those fisheries that have been sustained for a long time should be able to be sustained in the future, such as deep water trap fisheries for prawn, for cowcod, some hook and line fisheries, live fish, deepwater crab. The major fisheries are not sustainable not because of anything people have done, but because of expansion of the sea otter. If

Santa Barbara wants to be one of the last working harbors in the state it is important to address this issue.

Bruce indicated that Michael Robinson from UCSB is working on an ethnographic recording of traditional fisheries knowledge, and looking at hard bottom and soft bottom maps and adding more information to such maps from fishermen.

Bruce commented that the sea urchin business is in decline. The market has traditionally been in Japan, and Russia has taken over that market. The domestic U.S. market will only accept prime A-grade urchins. The fishery has been going on for 35 years.

Bruce explained that long term data sets on sea urchins have been provided by CalCOFI, NPS kelp monitoring, Steve Murray, Dan Reed. There are no other long-term data sets. It is hard to make these data sets because grants come in 2 to 3 year blocks. The sea urchin fishery conducts collaborative research with UCSD, the NPS, and CDFG. The bulk of the research on the data has been done by students. But Bruce said they (the sea urchin fishery) are running out of money, and have to choose to pay researchers, or pay lobbyists, or pay to fight sea otters. Bruce asked if the advisory council could support a matching grant. He said people need to know that collaboration gets you somewhere, and they need some letters of support from the sanctuary thanking those scientists who have stuck with them, and they need this body to explain to PISCO that they should also include fishermen – who are being excluded from the process. The work done on lobster is not connected to PISCO, but Sea Grant has helped bridge gaps. Bruce said he would like this group to say that what the fishermen and scientists have done together is important. Bruce emphasized that we need to show the fishermen that someone is going to make an effort to put together matching grants. The need amounts to \$40,000 a year and they have 18 years of data.

One of the big issues is acidification, Bruce said. Sea urchins collect calcium, and they are the types of critters that will be affected by acidification. This data is invaluable and past data could be analyzed.

Bruce explained that last year they competed against PISCO for the Montrose grant, and PISCO basically copied their protocols, and then the sea urchin group didn't get the grant. Bruce asked who was hurt by Montrose, and said it was the urchins. Bruce also said that John Ugoretz indicated he would support them in a letter from the CDFG.

Chris Mobley stated that the advisory council and the sanctuary have historically said that collaborative research is a key component of an overall research and monitoring program at the sanctuary. The sanctuary gave \$80,000 in funds to the local Channel Islands Marine Sanctuary Foundation to support collaborative research, but then Congress cut the NMSP budget. Chris suggested that perhaps Sean Hastings could organize a meeting with key fishermen who have been interested in collaborative work. We are going into a five year review of marine reserves monitoring and we need to assess what we have done and what we need to do. There could be a letter of support, or there could be more than that. The sanctuary and the staff would be happy to help organize a working group meeting or ad hoc committee. Then perhaps in the future the advisory council could have a more detailed agenda on this item.

Linda asked Chris and Mike to remind the group about how the advisory council addressed this issue in the past. Mike explained that a few years ago the Council contemplated the value of collaborative research after a presentation by Donna Schroeder, was convinced that in general that is important research, and then passed a resolution on the subject.

Linda suggested providing Bruce with a copy of the resolution, but Bruce said they are having an sea urchin meeting next week so there might not be enough time. Linda suggested that the resolution, which could be given to Bruce right away, could be used to help support a grant application.

Chris Mobley suggested that the idea of a working group could help address competition between academics and fishermen interested in collaborative research. Bruce recalled that collaborative research was supposed to be part of the quid pro quo. Bruce suggested that someone needs to be taken to task.

Linda indicated that the council cannot take an action (e.g., write a letter) today because it was not on the agenda, but suggested that Bruce talk to staff about forming an ad hoc working group to assist.

Scott Dunn recalled that one of the major issues was insurance liability and researchers not being able to go out on fishermen's boats. Bruce acknowledged that this is also true.

Linda stated that the council is supportive of this idea and again recommended that staff help Bruce talk to the people who can help with idea. Bruce also expressed frustration at the amount of funding given to PISCO vs. the amount of funding the sanctuary put into the sanctuary foundation, which the sanctuary has no longer been able to provide. Chris suggested that the people who fund PISCO have different objectives and recommended that the collaborative research not go head to head in competition against PISCO. Merit asked about who does the research. Bruce said the sea urchin divers have not done the research, they just paid for it.

Bruce asked if the council would write a letter in appreciation to Donna Schroeder and Mark Page for the work they did last year.

Linda reminded Bruce that the council typically notifies council members of potential actions by noting them on the agenda, and explained that perhaps Bruce should request more time on future agendas for this type of agenda item, in addition to the Commercial Fishing Working Group agenda item.

Greg Helms suggested that the Collaborative Marine Research Program selection subcommittee could write a letter for Bruce's group.

Linda thanked Bruce for bringing this to the group's attention.

Future Meeting Schedule and Agenda Topics

David Bacon asked about a future agenda item on artificial reefs. Mike noted that this meeting's agenda was too full, but this is on the work plan and it has not been forgotten about. Capt. David suggested that CARE may be another organization to look into for information or a speaker.

Linda asked whether there will be a SAC retreat. Mike said the budget does not currently allow a multi-night trip to Santa Cruz Island, but he is looking into a field trip.

Russell Galipeau suggested that it would be a great experience to have the Sanctuary Advisory Council on the beach at Scorpion when the tomol arrives. Acknowledging that Paulette was no longer at the meeting, Mike Murray said that in the past the sanctuary has been asked to not overly promote the tomol crossing. Russell noted that during the event the Park would still be open, that the general public is not excluded

from the event, and that SAC participation doesn't have to mean extra publicity. Mike clarified that it would be nice to have Paulette encourage the Advisory Council to observe the tomol greeting.

Mike indicated that by the September SAC meeting we should see the release of the supplemental DEIS and supplemental proposed rule on large vessel sewage and graywater. In addition, there is the issue of private insurance on fishermen's vessels for collaborative research, and item that Bruce Steele had raised at the last SAC meeting.

Bruce Steele said he would like to hear from Karen Worcester from the State Water Resources Control Board (SWRCB), and Southern California Coastal Water Research Project (SCCWRP), because their respective organizations have several water quality projects being conducted in ways that are not as collaborative as they could be. It would be interesting, Bruce said, to hear the SWRCB present on the cumulative effects of pesticides and herbicides. Bruce also said he is afraid that maybe the only reason people don't think these pollutants are getting into the ocean is because nobody is looking. Linda suggested having an update at a future meeting about the status of work on implementing recommendations in the SAC Water Quality Needs Assessment report.

Russell Galipeau said he would like ten to fifteen minutes on the September 21st meeting agenda to discuss Santa Rosa Pier reconstruction.

Schedule for future SAC meetings & events:

- Friday, September 21, 2007: SAC Meeting, Santa Barbara
- Friday, November 16, 2007: SAC Meeting, Ventura

Meeting highlights respectfully submitted by Channel Islands National Marine Sanctuary staff:

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